

# THE ADOLESCENT: TAKING ON THE TASK OF HUMANITY— CONDUCTING THE DIALOGUE BETWEEN NATURE AND SUPRANATURE

by Laurie Ewert-Krocker

*Defining what it means to be in the “bosom of nature,” to use Montessori’s words, Laurie Ewert-Krocker points out that the adolescent period of storm and stress is quelled by the natural world. But most important, when socialization is the essential developmental focus of the young adolescent, positive social organization is fostered by nature. The dialogue between nature and the human-built world is a conversation well worth having, leading to a profound understanding of what it means to use both the imagination and sensorial understanding to contribute to the world’s safekeeping.*

*Until he is twelve years old, nature ought to constitute the child’s primary interest. After twelve years we must develop in the child the feeling of society, which ought to contribute to more understanding among men and, as a result, more love. Let us develop admiration and understanding for work and for the life of man to this end (From Childhood to Adolescence 96).*

The role of man in society—this is the work of the adolescent: to come to an understanding of how human beings organize themselves, work together, move forward in history. This is what the adolescent must experience and absorb: division of labor; the experience of production and exchange; economic independence; care for self and others on a nearly adult level—running a “residence-hotel,” cooking, cleaning, doing laundry, and designing for the aesthetics of domestic life; running a store or a market; learning the “control of finances” (108); providing service to the community. These are the experiences that Maria Montessori prescribes for the adolescent, the “social newborn,” whose developmental task it is to enter adulthood and, in doing so, to inherit the best of human accomplishment and civilization.

But *where* should this prepared environment be? Where does she suggest that this introduction to adult social organization be located?

During the difficult period of adolescence it is desirable to have the child live outside his habitual surroundings, outside the family, in the country, in a peaceful place, in the bosom of nature. There, an existence in the open air, individual treatment, a sound diet, ought to be the first conditions for the organization of a center of studies and of work. (105)

“In the bosom of nature . . . the first conditions,” in the protective, nurturing embrace of nature. It seems a bit of a contradiction. One would think that the logical center of work and study when one’s task is to inherit the best of civilization would be in the city where the social organization is most refined, most complex, most well-developed, and apparent. When we speak of great civilizations in history, do we not usually refer to the most advanced urban centers, cities, and city-states, such as Catal-Hayuk, Mohenjo-Daro, Athens, Rome, Alexandria, Constantinople, Mexico City, Chichen Itza, Florence, Prague, Paris, London, Moscow? Given the obvious advance of civilization in urban centers—why the “bosom of nature”?

There is, of course, the obvious, although not necessarily researched and documented, notion that it is healing to be in natural surroundings, and adolescence is a turbulent time of life, in need of healing support. Montessori herself calls it “an age of doubts and hesitations, of violent emotions, of discouragements” (100). Those of us who work with adolescents can attest to the truth of that observation.

Although not every adolescent is dysfunctional, rebellious, or difficult; although the glimpses of potential we see in them are awe-inspiring and limitless; and although sometimes the work they accomplish is monumental—both physical and intellectual—even the healthiest adolescents have periods of emotional insecurity, days of self-doubt, moments of vulnerability in the face of peer and adult judgment. It is not an easy time of life. No adult remembers it as an easy time. So much transition, so much growth, so much developing brain ability that's not yet refined, so much of a black void ahead in the future, so many decisions to make.

So Montessori tells us what the prepared environment should be like:

Life in the open air, in the sun, a diet rich in vitamins furnished by the nearby fields are the auxiliaries so precious to the body of the adolescent; while the calm environment, the silence, the marvels of nature satisfy the mind and are conducive to its functions of reflection and meditation. (106)

The psychological life of adolescents is truly intense. They are naturally focused on themselves and their own inner lives—searching for clarity in values, forming a comfortable identity. They have lots of questions and lots of doubts about who they are or who they should be, about what they can accomplish or what they will be good at. They are also remarkably driven to stay networked to their peers in a constant stream of exchanges and interactions—afraid that they will miss a significant moment of membership in the group, afraid that if they are not omnipresent, someone else may jockey them out of position in the complicated fabric of relationship. It is absolutely essential—in the mind of the adolescent—to establish and maintain acceptance and membership in the group. It is the primary drive of their existence. They are extraordinary social beings in the making. They actively pursue understanding of social organization.

Montessori recognized a similar need for socialization in the elementary child—*gregario*, “the herd instinct”—and established the importance of honoring that need in the second-plane environment, by encouraging work in small groups and in going-out experiences, and in the opportunities to work through issues of justice in the community.

Socialization is even more intense in the third plane, presumably to guide the adolescent in practice and conscious learning about the human social



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organization and, hopefully, social harmony that is necessary for humanity to function productively, to make progress.

But socialization is an exhausting aspect of their work. (It is an exhausting aspect of *our* work.) Coupled with the strains of rapid physical growth and the misfirings of a brain in the process of re-wiring itself, a calm, natural environment makes sense, an environment with less stimulation than that of a typical urban/suburban one.

In *Last Child in the Woods*, Richard Louv points to similar suggestions that the effect of nature can be therapeutic. He notes the observations of Sebastiano Santostefano, director of the Institute for Child and Adolescent Development, who comments that “nature has the power to shape the psyche, and that it can play a significant role in helping traumatized children” by providing a personally malleable landscape for each individual to interpret. In nature, individuals find a unique path of self-expression (cited in Louv 51), helpful in processing inner struggle. Not that all adolescents are traumatized. Most adolescents do, however, struggle emotionally and psychologically at some point, on some days, for some periods of time. I am sure we will hear a great deal more about



the healing and restorative aspects of nature tomorrow from Mr. Louv, and we anxiously wait for more researchers to document and validate the evidence of nature's healing power, but until then, as Montessorians, we have our own observations and intuitions to go on, and Montessori's general guidelines.

However, even if you provide access to the natural world in the adolescent environment, it's not a guarantee that the adolescents will immerse themselves in it. Adults working with adolescents on a daily basis must structure the environment so that it invites the adolescent to *be* out in nature. Adolescents do not necessarily choose to go outside on their own—even if it's right outside their door and they are *free* to go out. I often think of adolescents in terms similar to Montessori's observation of the zero- to six-year-olds as the "furniture children." Adolescents are like the "cave children" or the "womb children." Walk into their bedrooms and tell me that they aren't re-creating womb space. It's dark. They never open the curtains. There's lots of undulating, crumpled up fabric lying around—clothing, sheets,

and blankets. There is a chaotic collection (some would say "suffocating" collection) of very personal items closing the room in, drawing all energy inward. They often prefer basements to hang out in. Are they not awaiting rebirth?

Outside of their cave-wombs, they will choose their location based on where their peers are. So in an adolescent community, we must navigate life so peers are frequently outside working on activities that engage the body and employ the senses. Our programs, our curriculum, must make it meaningful for them to actively engage the natural world. The key with adolescents is to offer them work and study that feels genuinely purposeful to their own community, but is actually really good for them individually. The beauty of the farm or the land-based environment for adolescents is that it truly can be a "limitless field for scientific and historical studies" (*From Childhood to Adolescence* 106) and provide a wealth of opportunities for contributions to the community that valorize an individual, and, at the same time, provide moments of calm and healing.



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Once outside, they are usually happy to be there and may choose to find reflective time for themselves beyond the peer group.

So opportunities for engagement in nature need to be right outside the door and continue beyond the building. Here are some that we are fortunate enough to have at the Hershey Montessori Adolescent Community:

- An herb garden for the kitchen right outside the kitchen door. It requires redesigning every year based on an analysis of what herbs and spices we use the most, as well as soil analysis, replanting, pruning and weeding, harvesting, and drying in the fall. It can lead to historical studies of indigenous and exotic herbs, uses of herbs and recipes from different cultures, cost analysis of saving money by not buying herbs and spices, the microbiology of food preservation.
- An animal barn with sheep, pigs, cows, goats, and horses. They require feeding twice a day, milking once or twice a day, depending on the seasonal cycle, cleaning of stalls, repair of stall doors, windows, and hardware, medical attention, habitat analysis, birthing assistance. Projects that revolve around these animals can lead to studies of animal science, classification, evolution, domestication, the cycles of insemination, pregnancy, and birth, analysis of meat production, nutritional requirements for humans and animals, issues of vegetarianism versus meat production and consumption, the history of domesticated animals and their relationships to humans in different cultures and throughout history.
- Organic vegetable and flower gardens. They require yearly designing, decision-making about methods of organic production, soil analysis, seed ordering, planting, watering, weeding, harvesting, decisions about how much to preserve for our consumption and how much to sell to the public, cost analysis of market sales, cost analysis of the kitchen budget, picking, arranging, selling at the market, consideration of growing heritage species, cooking for our own community. The gardens invite plant science, soil science, water study, the science of nutrition and food, the science of interdependent and symbiotic biological relationships, erosion, compost and manure applications, and the history of agriculture and agricultural methods.
- A bioshelter/greenhouse. It requires an ongoing supply of firewood and a twice daily feeding of the furnace to keep it warm in winter, as well as daily/weekly care of plants that are currently growing in it—either lettuce and microgreens in the winter or seedlings for vegetables and flowers for spring planting. It has fans, thermostats, watering equipment, heating tubes, a living systems model, and an aquaponics setup—all of which can be extensions of biology study and also ongoing facility maintenance tasks.
- The maple/ash/beech climax forest. Some of the forest we are leaving untouched to regain its wildness; some of it we must manage for firewood supply and as a maple sugar stand.

Decisions about which trees to thin and which to leave lead us to studies of species interdependency, forest succession, erosion and soil analysis, and water quality testing. Decisions about which trees to tap for maple syrup lead us to studies of tree and plant structure and processes, measurement of circumferences, and analysis of species density.

- The beaver-made marsh at the back of our property, home to wildlife—deer, muskrat, herons, beaver, snakes, small mammals, great horned owls, many species of birds, and now maybe a return of coyotes and otter—leads us to studies of biodiversity, local ecology, and the history of habitat change in our region.

Ponds, creeks, valleys, canyons, woods, watershed regions—all of these can be the focus and impetus for stewardship, study, and practical work. The value of a land-based environment, whether a farm or another environment that affords exposure to nature, begins to make itself clear: It provides purposeful work linked to key studies of science and history with the added therapeutic value of exposure to the fundamental elements of nature.

And let's not forget the wealth of sensorial experiences in and of themselves: hands in dirt and water, handling vegetables; handling tools like saws, trowels, shovels, pruners, wire cutters, motors, wheelbarrows; the cold of snow and ice on face and hands while collecting maple syrup, shoveling snow, repairing frozen pipes to the barn, breaking the ice off of the chickens' water; the warm breath of sheep eating hay, the smell of a billy goat's romantic scent; the slippery mucus wiped off a newborn lamb; the smell of locust trees in the spring and clover in the summer, and the deafening sound of tree frogs near the pond at night in April. The trail of stars on a clear night when Orion points to a visible Milky Way.

The work of the hands inevitably accompanies the work of science and history when you live and study on the land. Cultures around the globe throughout human history have performed these same fundamental acts: chopping wood, digging trenches, putting seeds into the ground, using pitchforks to clean stalls, hammering nails, birthing lambs and calves, milking cows, collecting honey, carting manure in wheelbarrows. And through these fundamental acts, basic scientific concepts were realized: the forces of simple machines, genetic manipulation of plants,

the physics of structures, the energy of water, the chemistry of soil.

Given all of this experiential learning, where is the introduction to society that Montessori suggested should be the primary developmental task of the adolescent? It occurs on two levels. One is in the experience of division of labor that is required for a community to operate on the land. It becomes profoundly obvious why it takes many hands to make work light, and one comes to appreciate the social order established by cultures of long ago who were faced with similar challenges—so much work to do, so many possibilities for improvement and expansion if someone stays focused on one area of the work. Oh, how we need experts in every field, how we don't all want to have to be responsible for everything—we would never get anything done. Experience of social organization also occurs in the experience of commerce—of production and exchange—when the community can grow, harvest, and sell its own produce and sell its own wood products, maple syrup, Christmas wreaths, beeswax candles. The land and its resources make that commerce and exchange possible for adolescents.



Courtesy of Marin Montessori School, Corte Madera, California



But even more important, from a Montessori perspective, the adolescent, who is charged with taking on the task of humanity in the big picture, in the cosmos—our cosmic task—must be placed in a concrete environment that reveals the interface of the natural world and human action in it. The adolescent must come to understand on a very fundamental level how the dialogue between nature and human-designed supranature is conducted, the dialogue between nature and human society, between nature and human civilization. This dialogue, this interaction, between nature and the human re-structuring of nature, is what they will inherit. They need to understand it as much as possible, in their hands as much as in their heads—and to see that fundamentally, it is not an evil. It is what humans do. It is what humans have always done. It is, in fact, what makes us human.

Human beings are not out of nature, above nature, in charge of nature, on top of nature, at the edge of nature—we are *part* of nature. We are a living organ in a larger organism. Our interdependence with all other aspects of the planetary organism is fundamental and now—with the wealth of evidence from the emerging studies of biodiversity, ecology, and even global environmental change science—appears irrefutable.

As human beings, we are fundamentally programmed to adapt to our environment and adapt our environment to our needs. What we change, what we construct, what we control, alter, synthesize, and mold out of nature—that is what Montessori called “supranature.” The message to our young people should not be that we should stop acting on our environment. How can we? It is what humans do. The message should be that something has kept us out of balance with the natural world, out of balance within the larger organism. What leaves us at risk is our inability to act with moral or ethical guidance. According to Montessori, we must change the basic moral quality of individual human beings in order to change the collective work (and damage) of unguided humanity. And we must start with the child.

In working with adolescents, what becomes clear to us is a profound awareness of what must ultimately be understood by the “New Children” of this age: that the interaction between nature and supranature must happen with the most sophisticated



Picking corn for the school corn festival, courtesy of Colegio Montessori de Tepoztlán's Farm School, Chiconcuac, Morelos, Mexico

consciousness and conscience possible. And, as with all Montessori learning experiences, one must absorb the truth of the generality by entering the sensorial. You come to know the truth of interdependence by experiencing it firsthand through the senses, through the body, through the work of the hands with the work of the head.

One risk of not learning sensorially is a risk that Richard Louv points out—that teaching children about environmental degradation in the abstract (the tragic loss of the Amazonian rainforest, for example) can result in ecophobia, a fear of ecological deterioration, which can then lead to a disassociation from nature (133). This is especially risky for adolescents, who are sensitive to doomsday projections and need to have faith in the future cultivated by everyone around them.

But another equally important reason for the adolescent to experience the interrelationships between the natural world and the human alterations of the natural world is that a genuine ability to perceive global relationships can occur only when one is first able to perceive the finely detailed relationships that occur in one's own ecological niche. In his book *Bringing the Biosphere Home*, Mitchell Tomashow points out that scientists who study the uncertainties of environmental change:

...share similar approaches to perceiving the natural world. In almost every case, they participate in ongoing research about a local place, a specific habitat or species, or a series of questions about a population, community, or landscape. While engaged in research, they learn how to investigate that place in fine detail, using the best of their scientific expertise as well as whatever their five senses can observe. (2)

Tomashow asserts that to have the ability to conceptualize environmental issues on a global scale, one must first have the trained skills to observe the details of local interrelationships, relationships that one can actually perceive with one's own senses. Global warming as a concept has to be imagined, but the observer who has perceived both the simplicity and the complexity of relationships at the ground level, with her own eyes, ears, nose, and hands, will be in a better position to truly understand a global relationship through the imagination. This is a remarkably Montessorian concept: to work from the sensorial to the abstract, from the concrete details to the generalization. Says Tomashow:

Global environmental change is simultaneously ubiquitous and invisible. Without sophisticated instruments, you can't actually see the ozone hole.... Biodiversity is a theoretical concept reflecting the rich fabric of life that sustains any ecosystem. It takes an experienced observer to assess various biodiversity indicators. (36)

Global change is too elusive to grasp, yet too profound to ignore. Becoming good observers of interdependent relationships is one of the important tasks our next generation must take on. They must have the sensorial experience of those

relationships in nature and in supranature. So it follows logically that they must be in an environment that is a point of interface between nature and humanity.

In the "bosom of nature" to heal and reflect, with fundamental experiences of how humans have organized themselves and constructed civilizations out of nature's bounty, and with sensorial training in perceiving the subtle interdependencies of nature and humans: Adolescents must learn to engage in the dialogue between the living organism that is the planet and its most interactive creatures—themselves. It is our hope and our investment that they learn to conduct the dialogue with a higher level of consciousness and conscience than we have.

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